Tracking the Yeti in the snow

Looking for metal-poor massive stars

(I know there is way too much snow in this picture
for a beach conference, but wait for it)

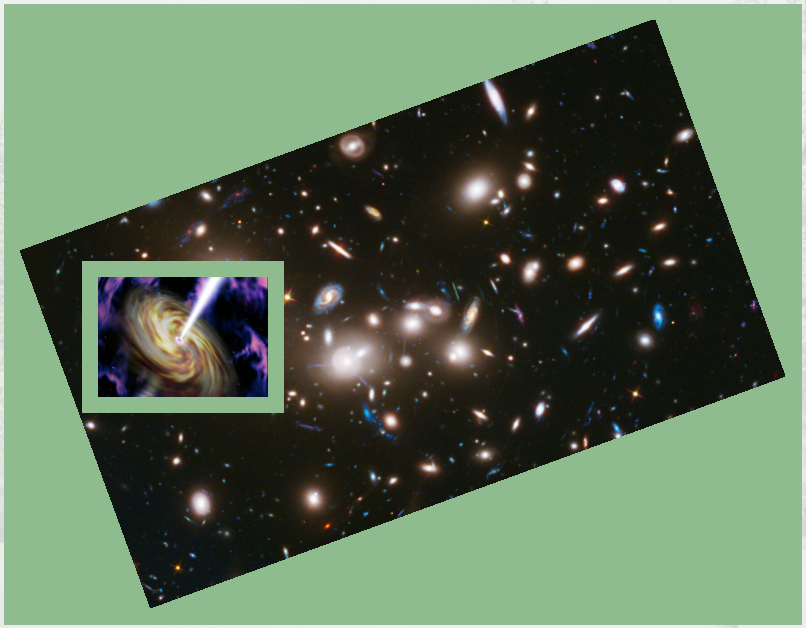
Dorottya Szécsi

Frontiers of Massive Stars
Ensenada
16th July 2018

Massive stars with $Z < 0.1\ Z_{\odot}$

Massive stars with $Z < 0.1\ Z_{\odot}$

At cosmological distances…



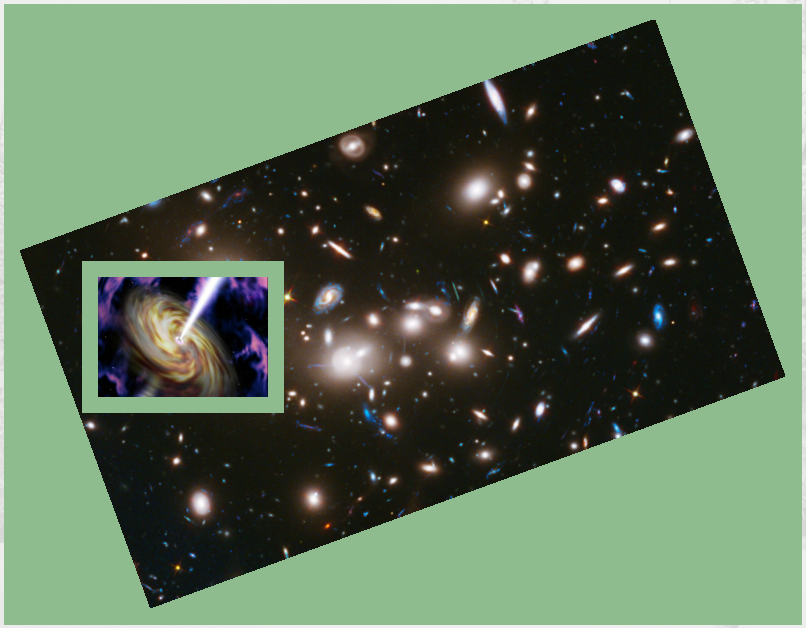
High-redshift galaxies & explosions

Massive stars with $Z < 0.1\ Z_\odot$

In the Milky Way...

Globular Clusters (Szécsi+18)

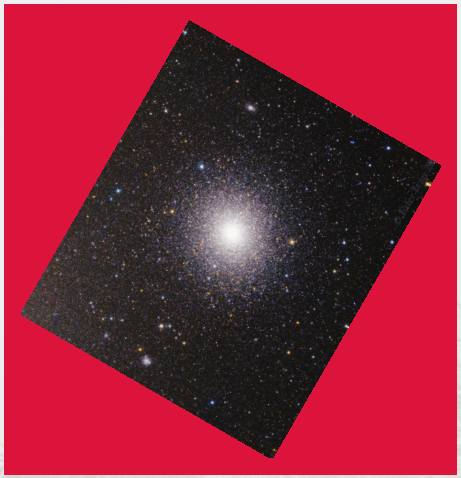
At cosmological distances...



High-redshift galaxies & explosions

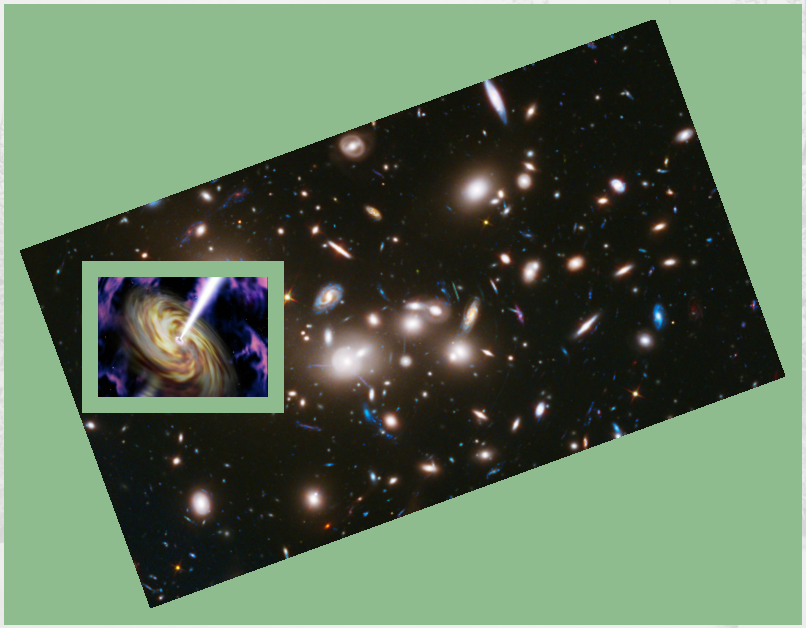
Massive stars with $Z < 0.1\ Z_\odot$

In the Milky Way...



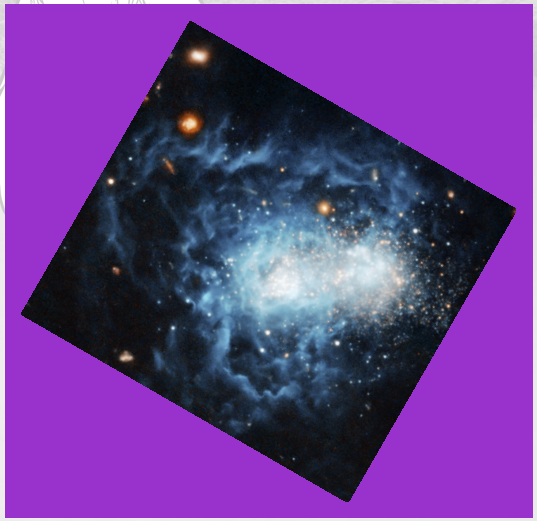
Globular Clusters (Szécsi+18)

At cosmological distances...



High-redshift galaxies & explosions

Close enough...

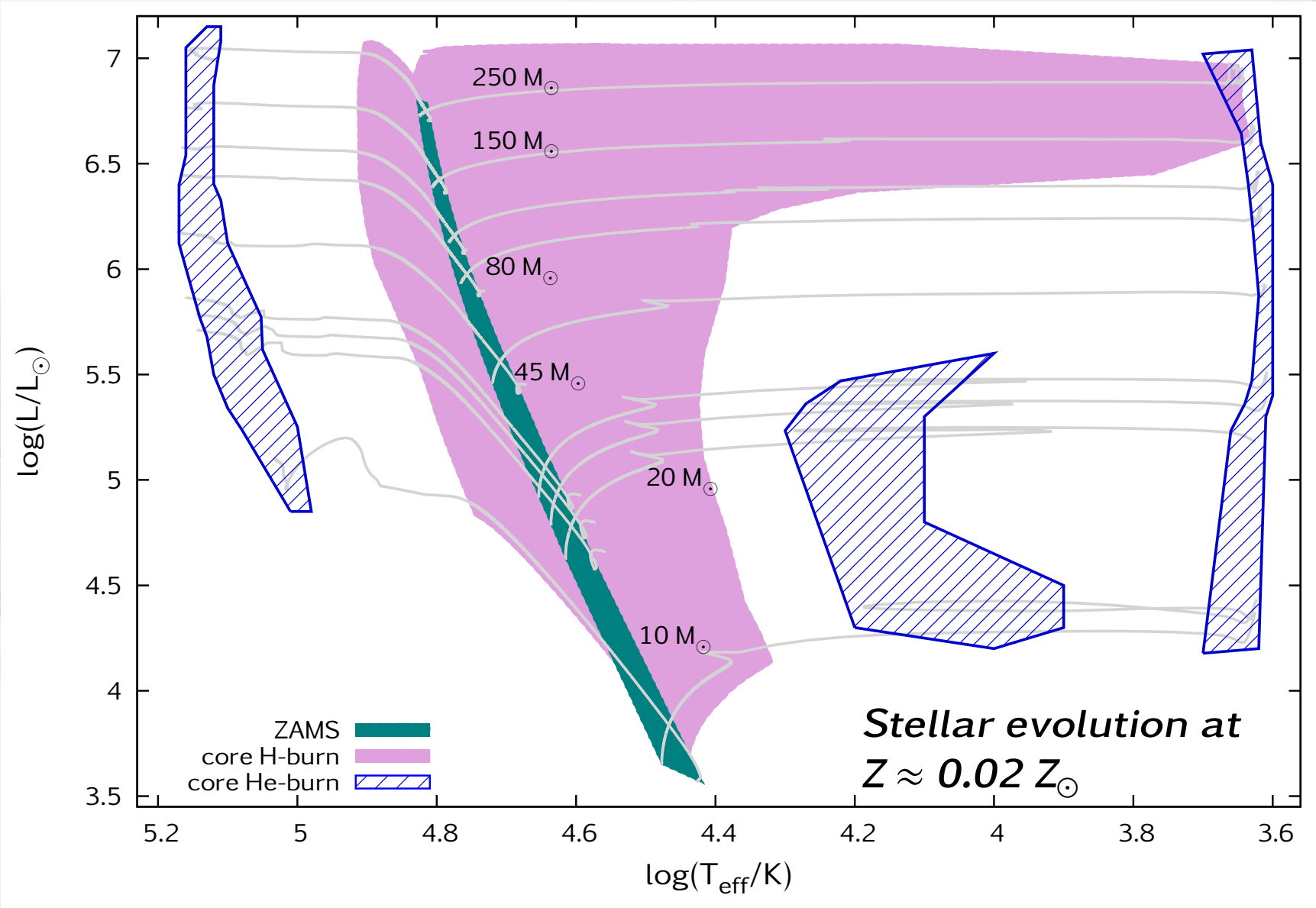


Dwarf galaxies (Szécsi+15)

The theory of the Yeti...

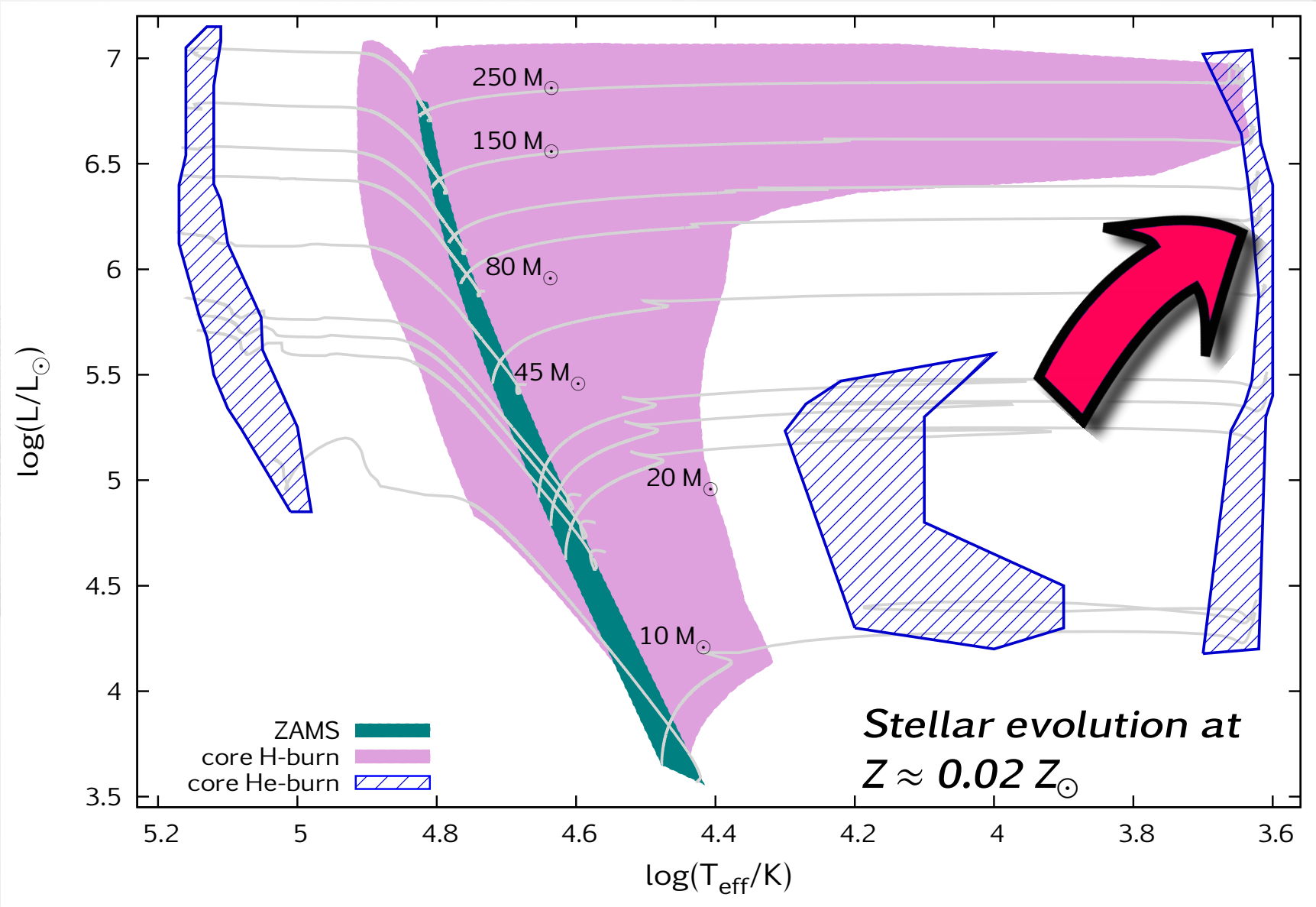
(Szécsi+15)

The theory of the Yeti...



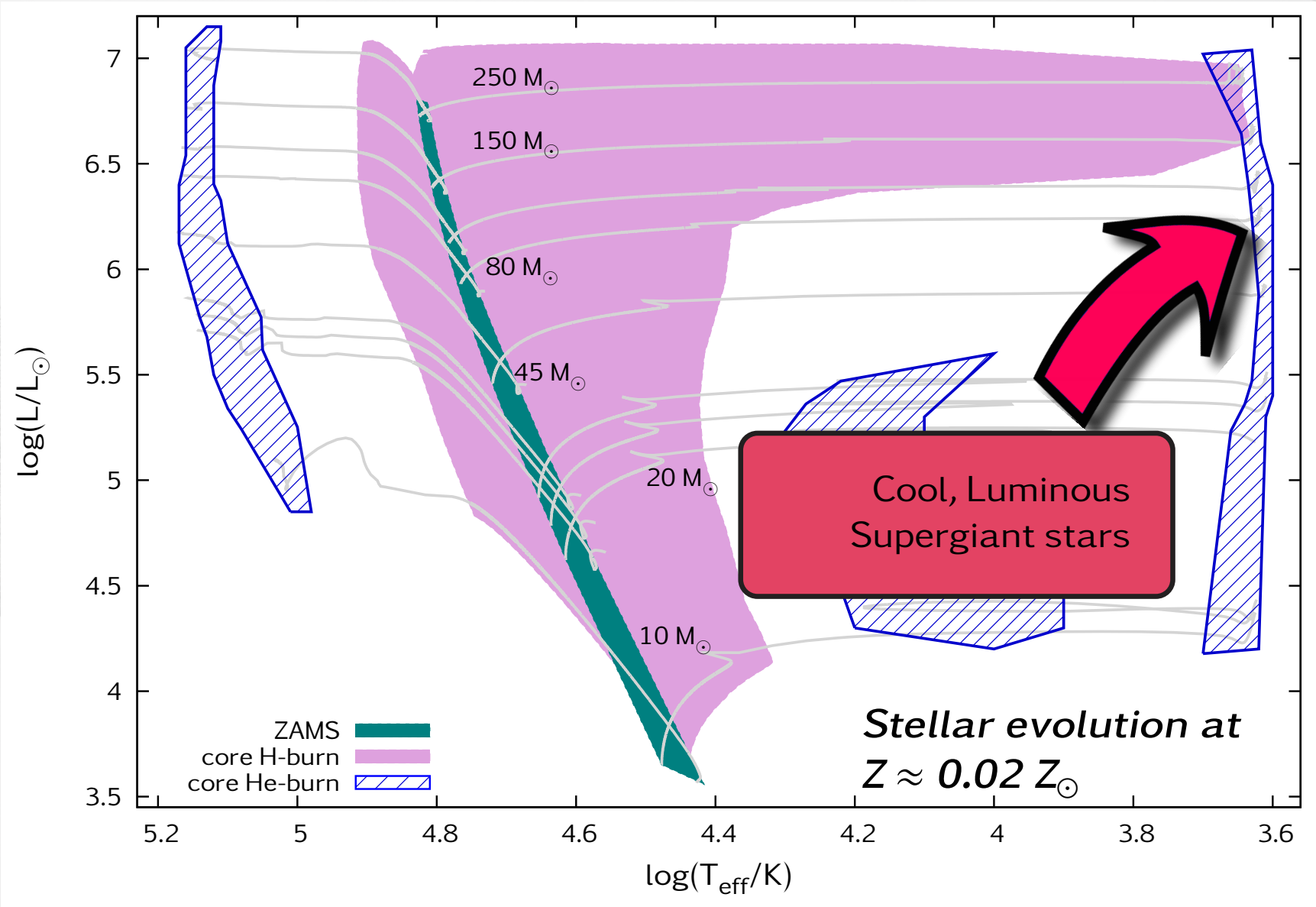
(Szécsi+15)

The theory of the Yeti...



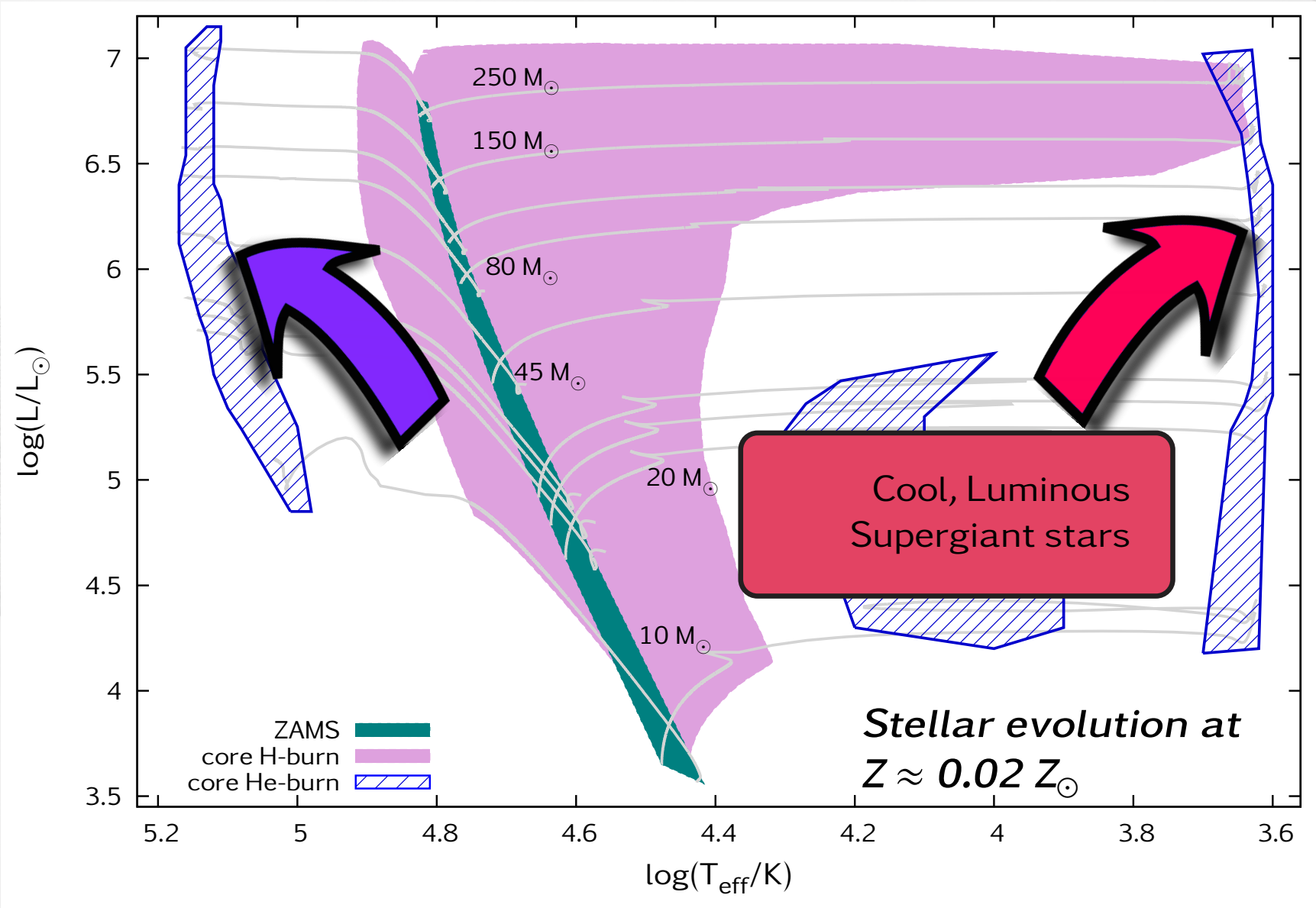
(Szécsi+15)

The theory of the Yeti...



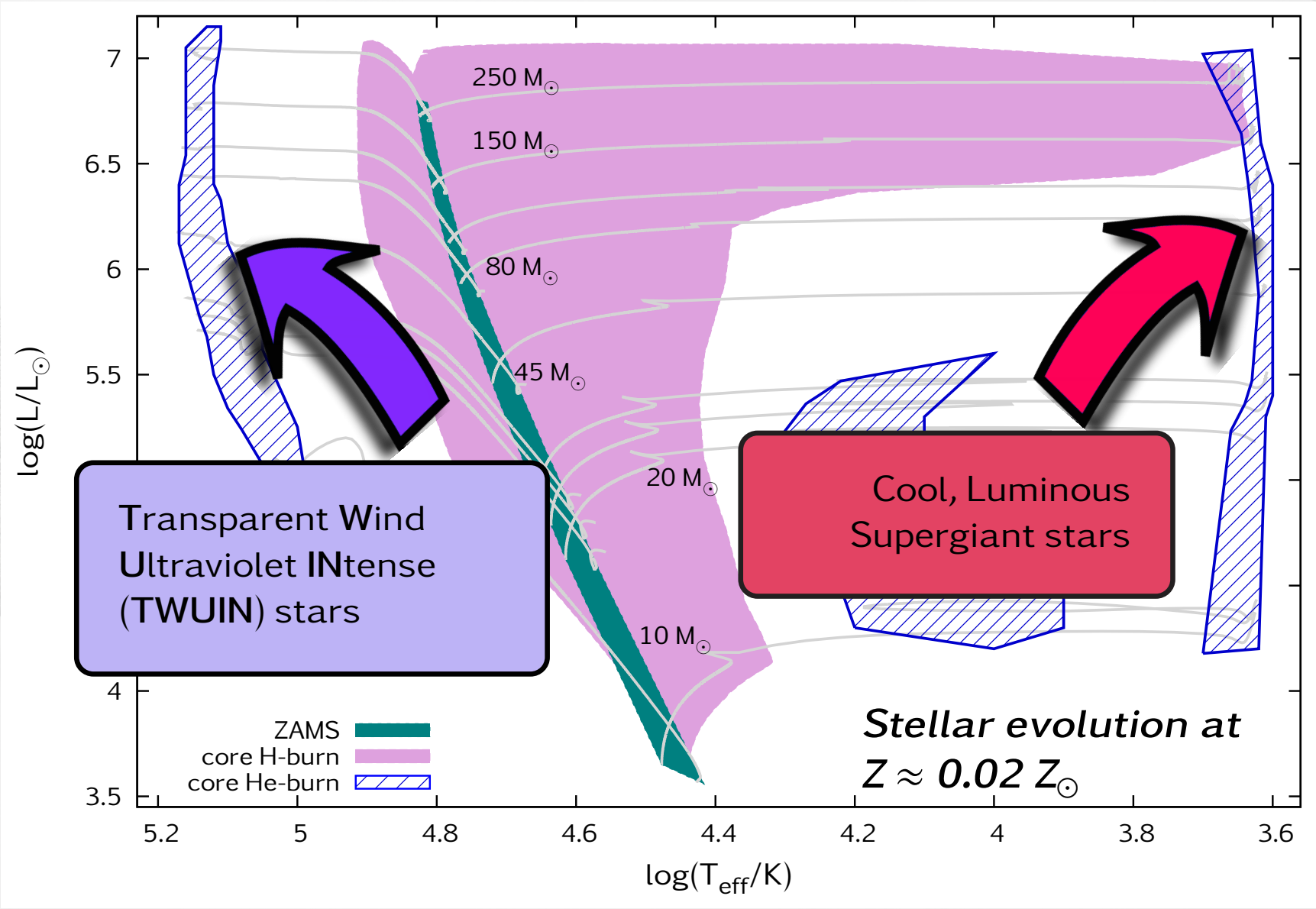
(Szécsi+15)

The theory of the Yeti...



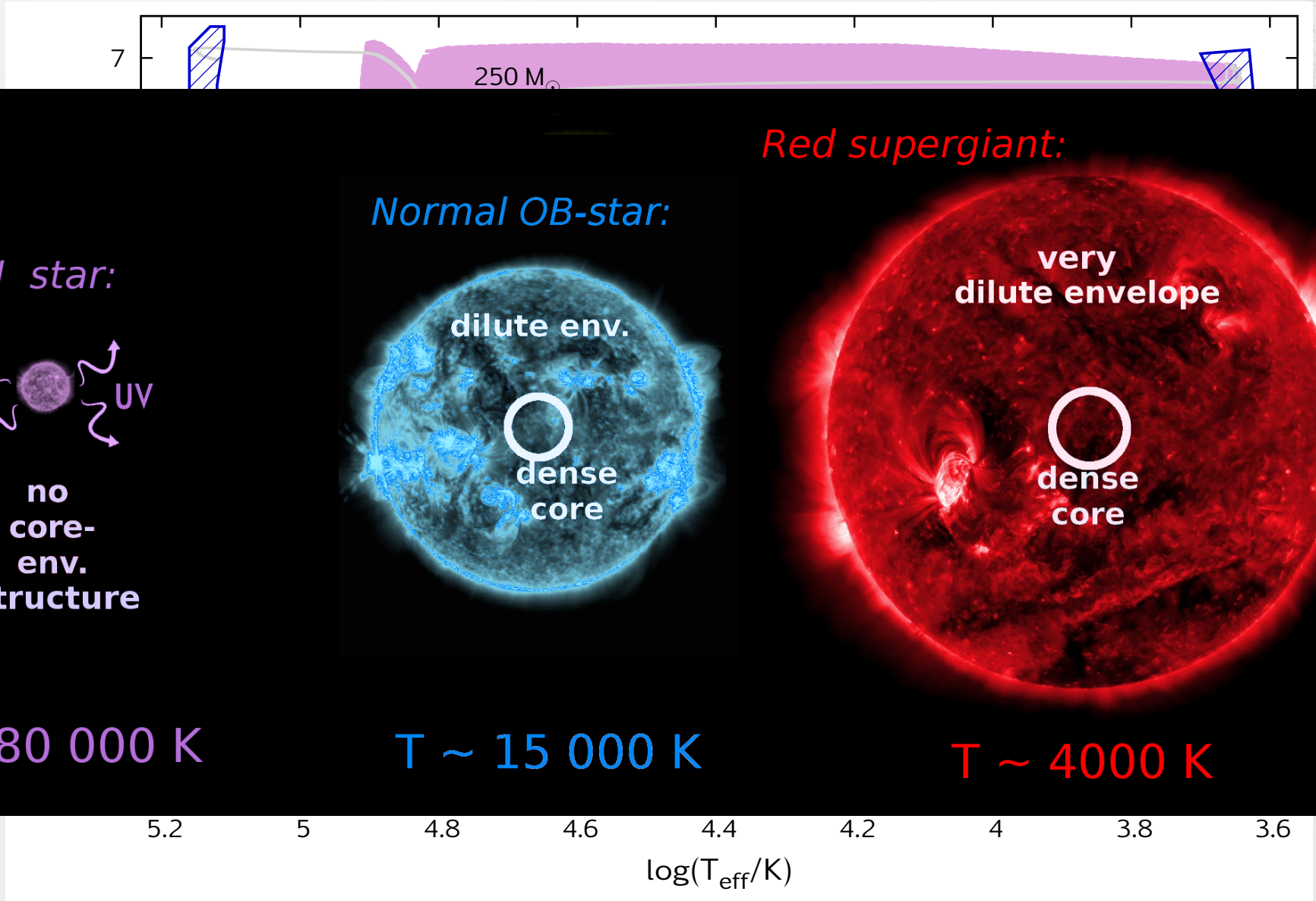
(Szécsi+15)

The theory of the Yeti...



(Szécsi+15)

The theory of the Yeti...



(Szécsi+15)

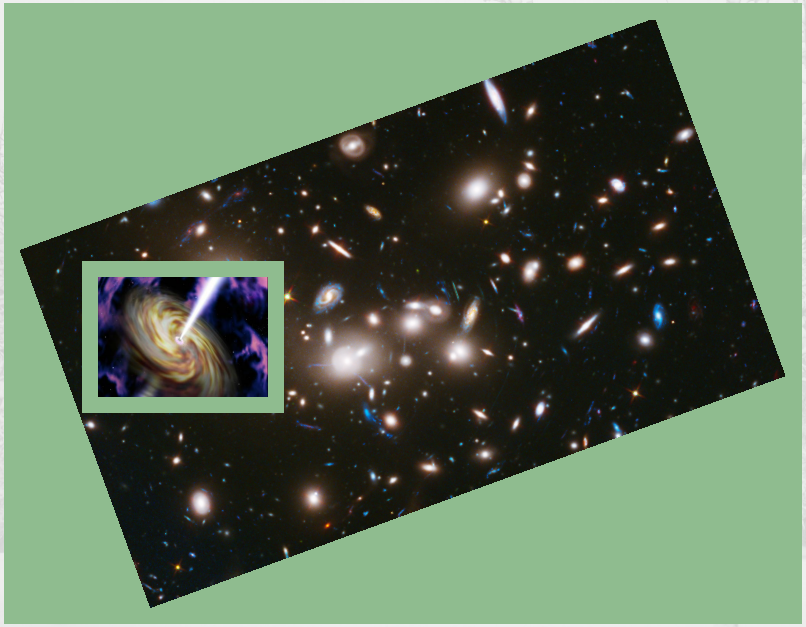
Populations!

Populations!

In the Milky Way...

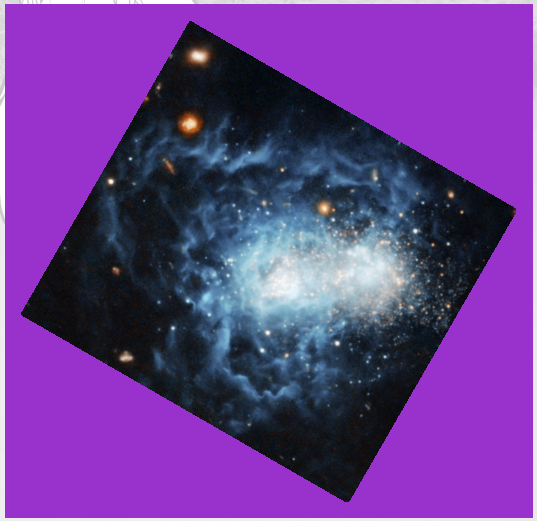
Globular Clusters

At cosmological distances...



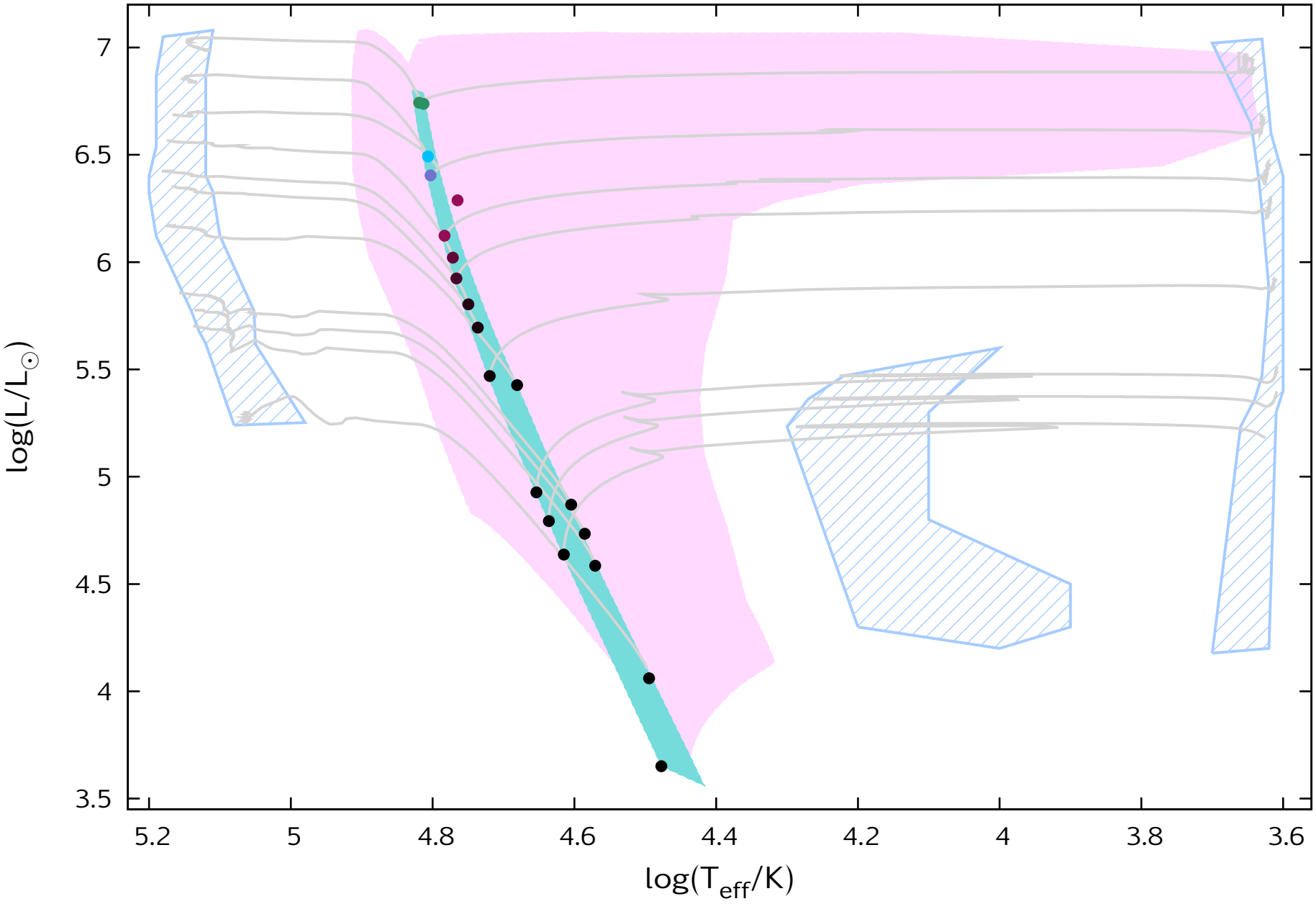
High-redshift galaxies & explosions

Close enough...

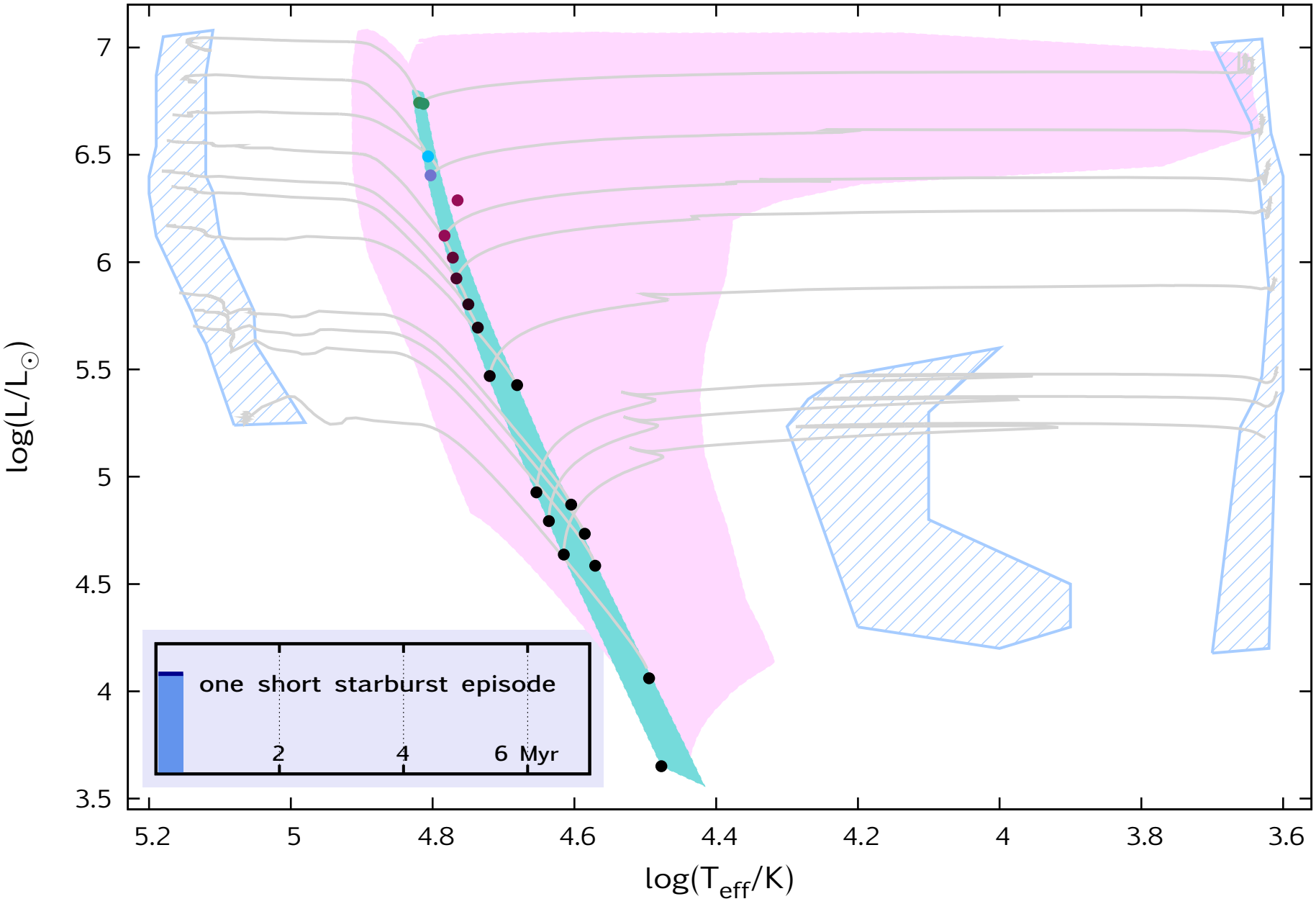


Dwarf galaxies

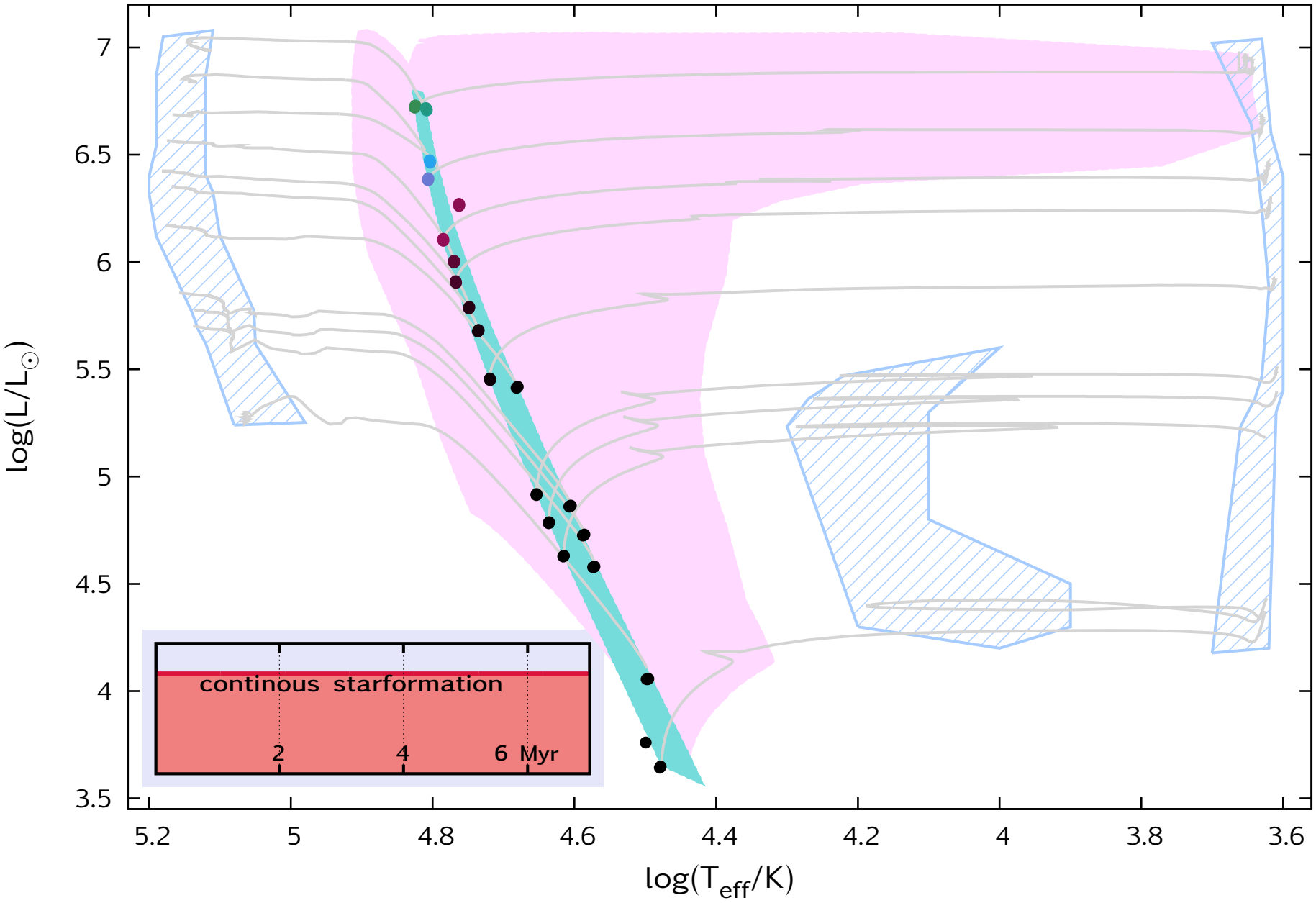
Simulating a population...



Simulating a population...



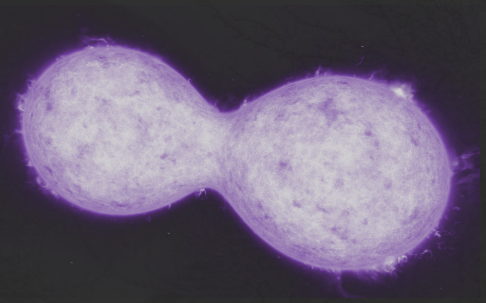
Simulating a population...



Simulating a population...

Simulating a population...

Binary populations?



...COMPAS!

see Alejandro Vigna's talk (Friday)

Transparent Wind Ultraviolet INtense stars (TWUIN stars)

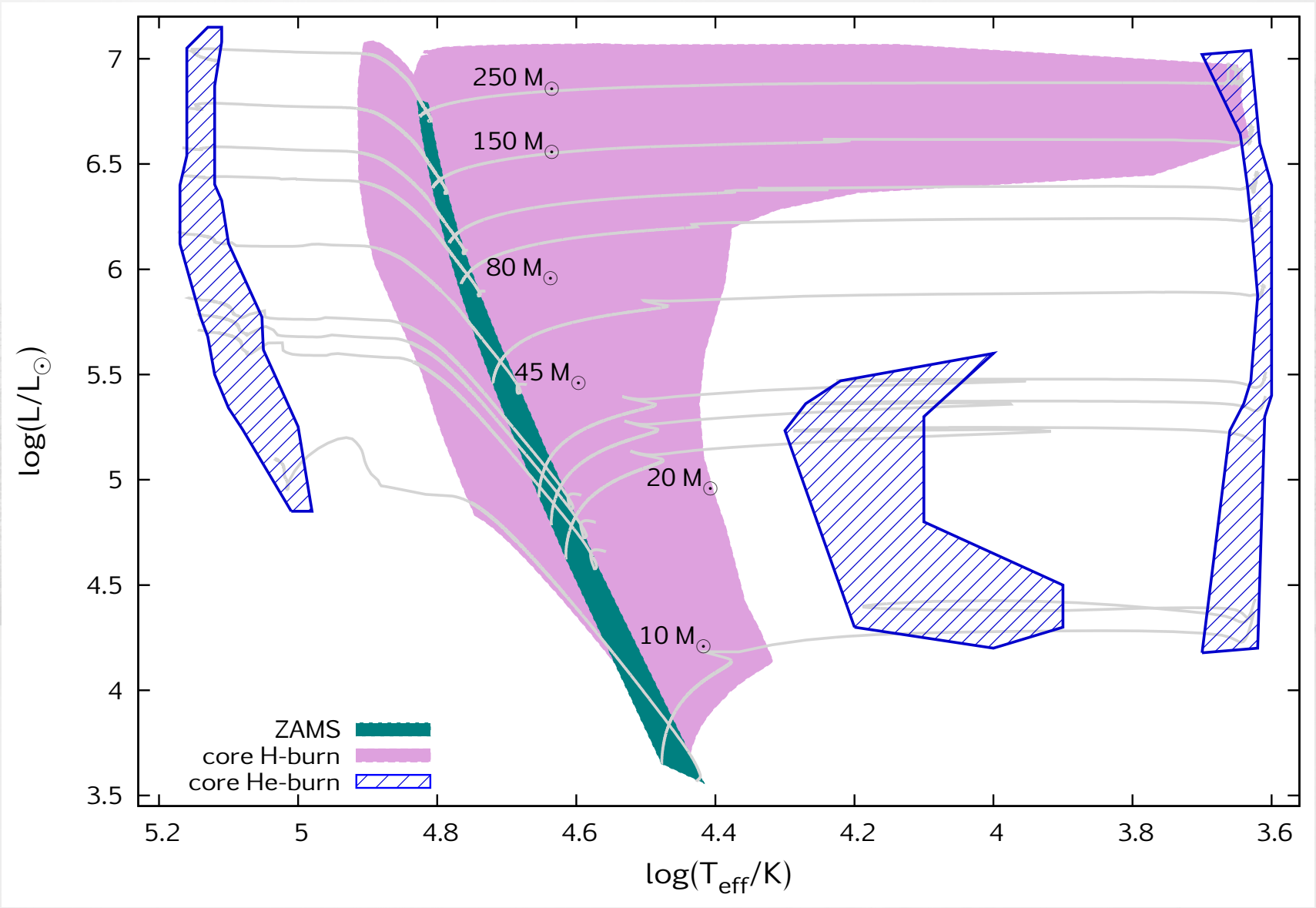
– what do they

look like?

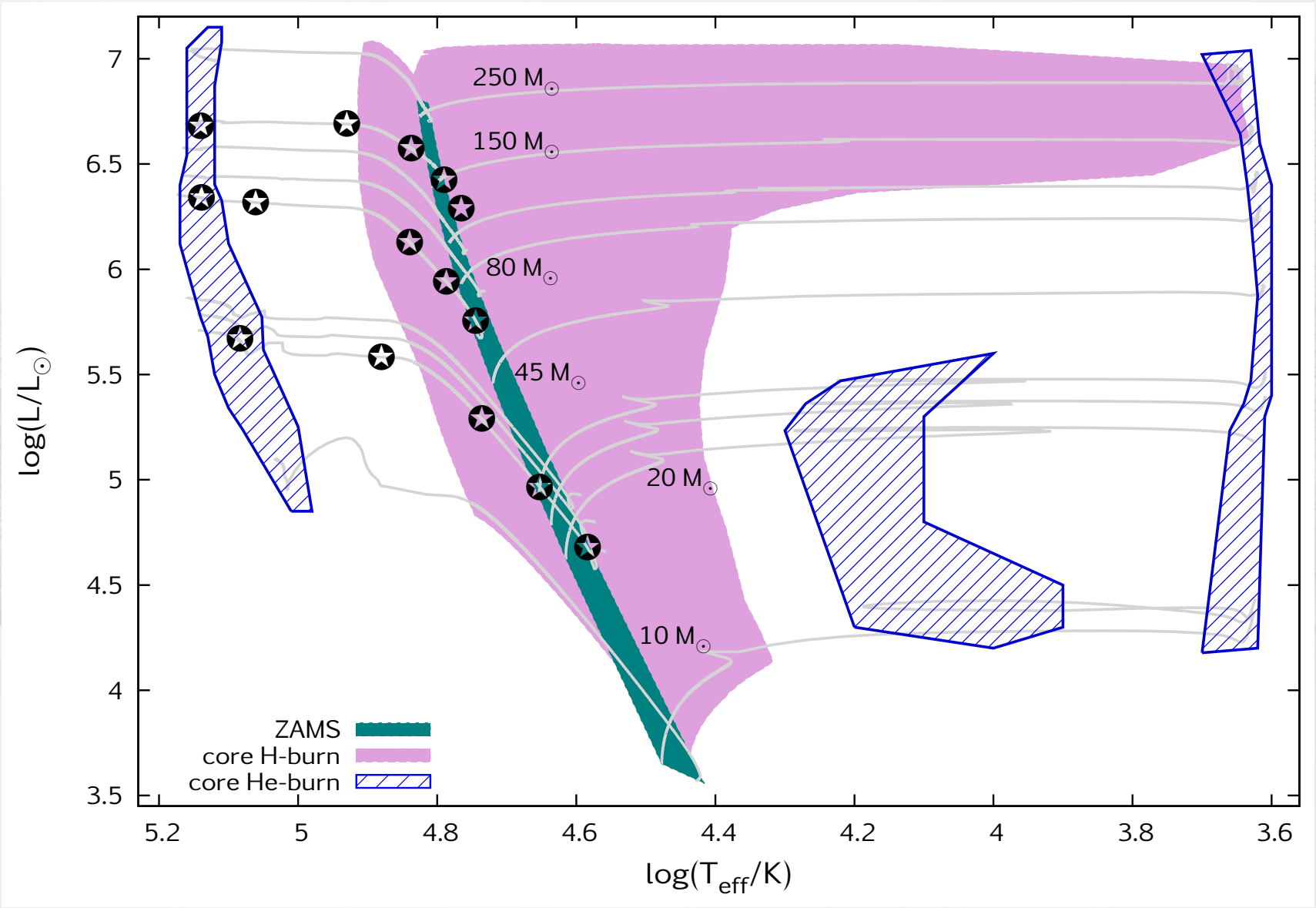
(Kubátová&**Szécsi**+in prep.)

TWUIN spectra modelling

TWUIN spectra modelling

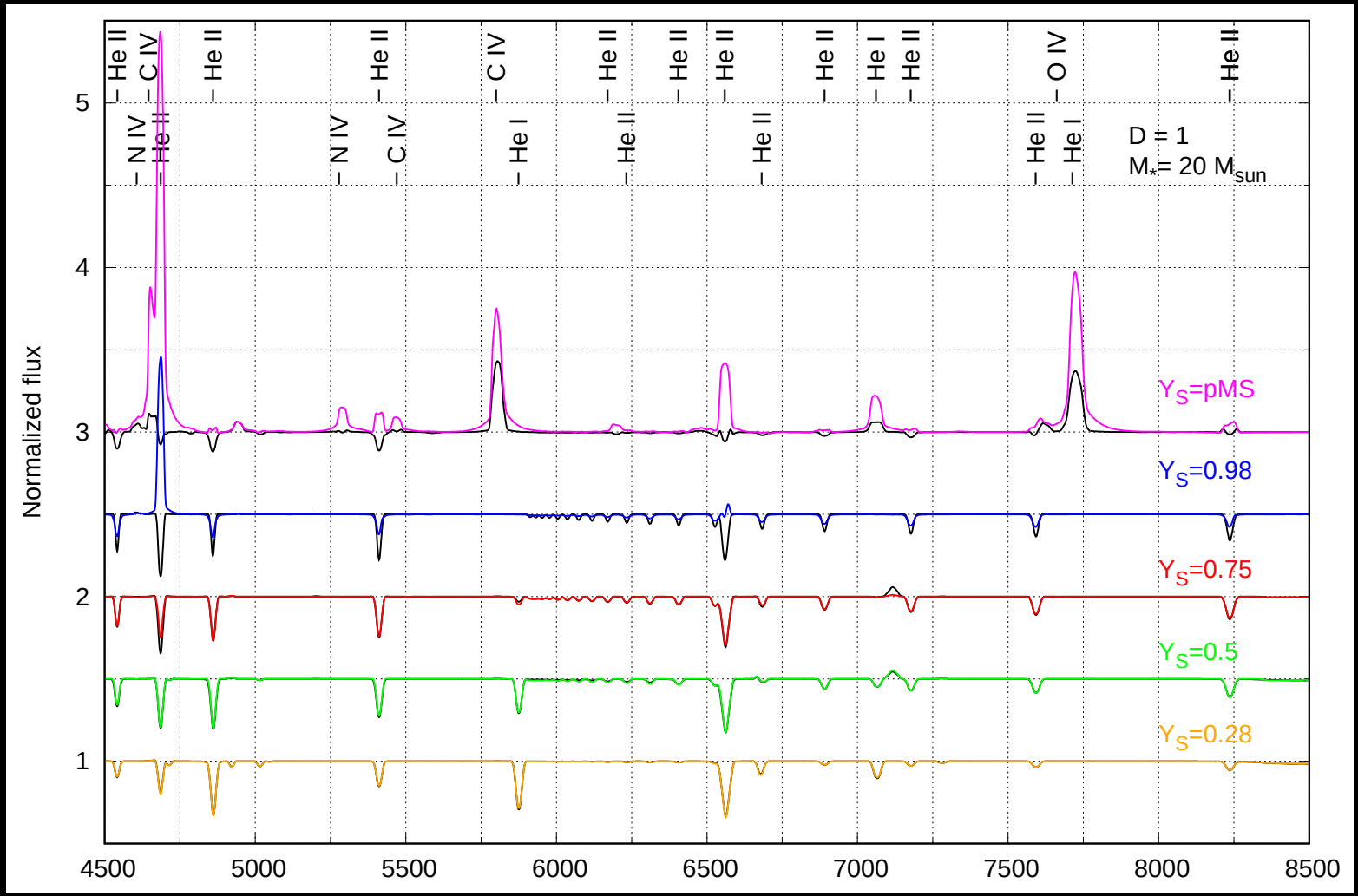


TWUIN spectra modelling



TWUIN spectra modelling

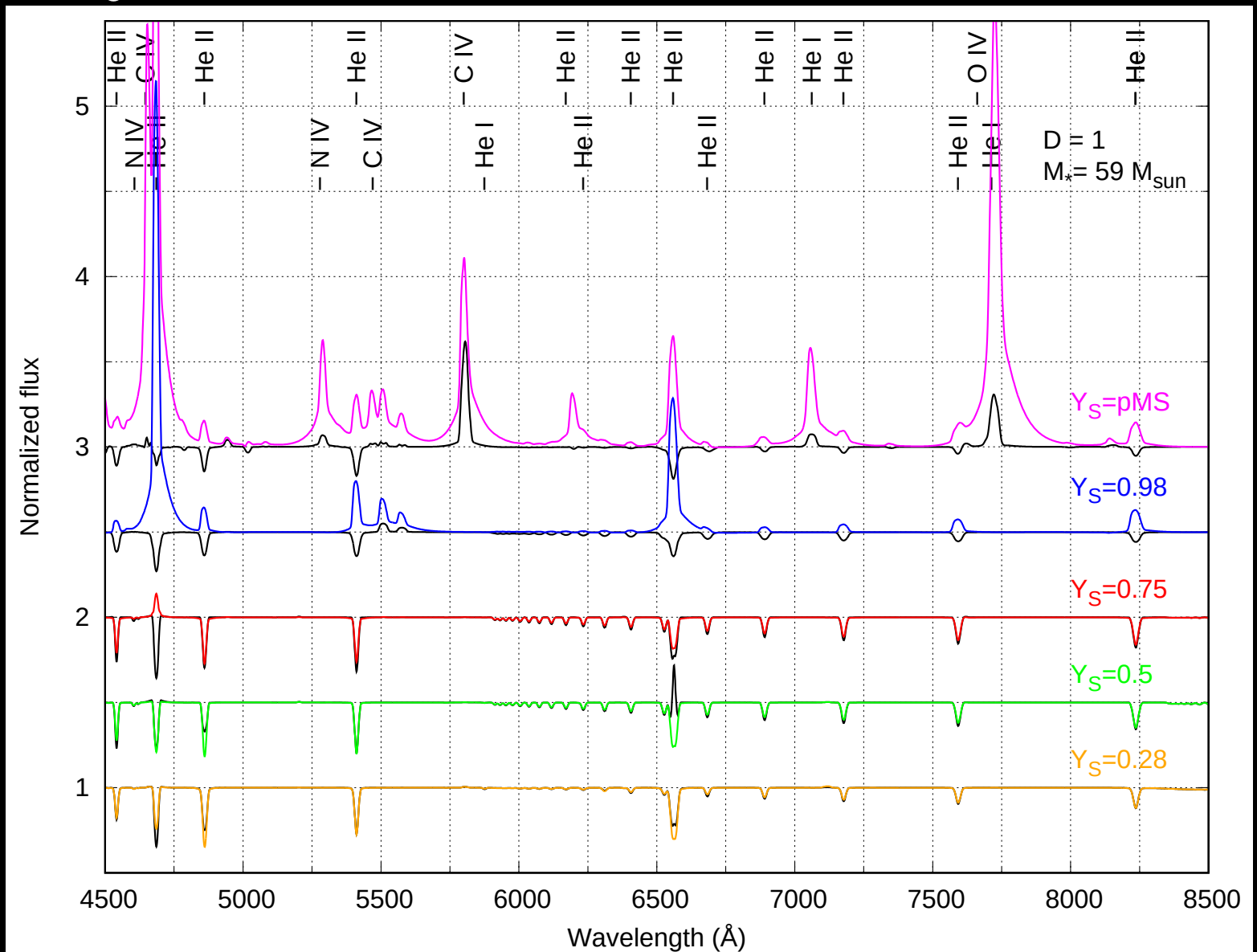
20 $M_\odot$



(Kubátová& Szécsi+in prep.)

TWUIN spectra modelling

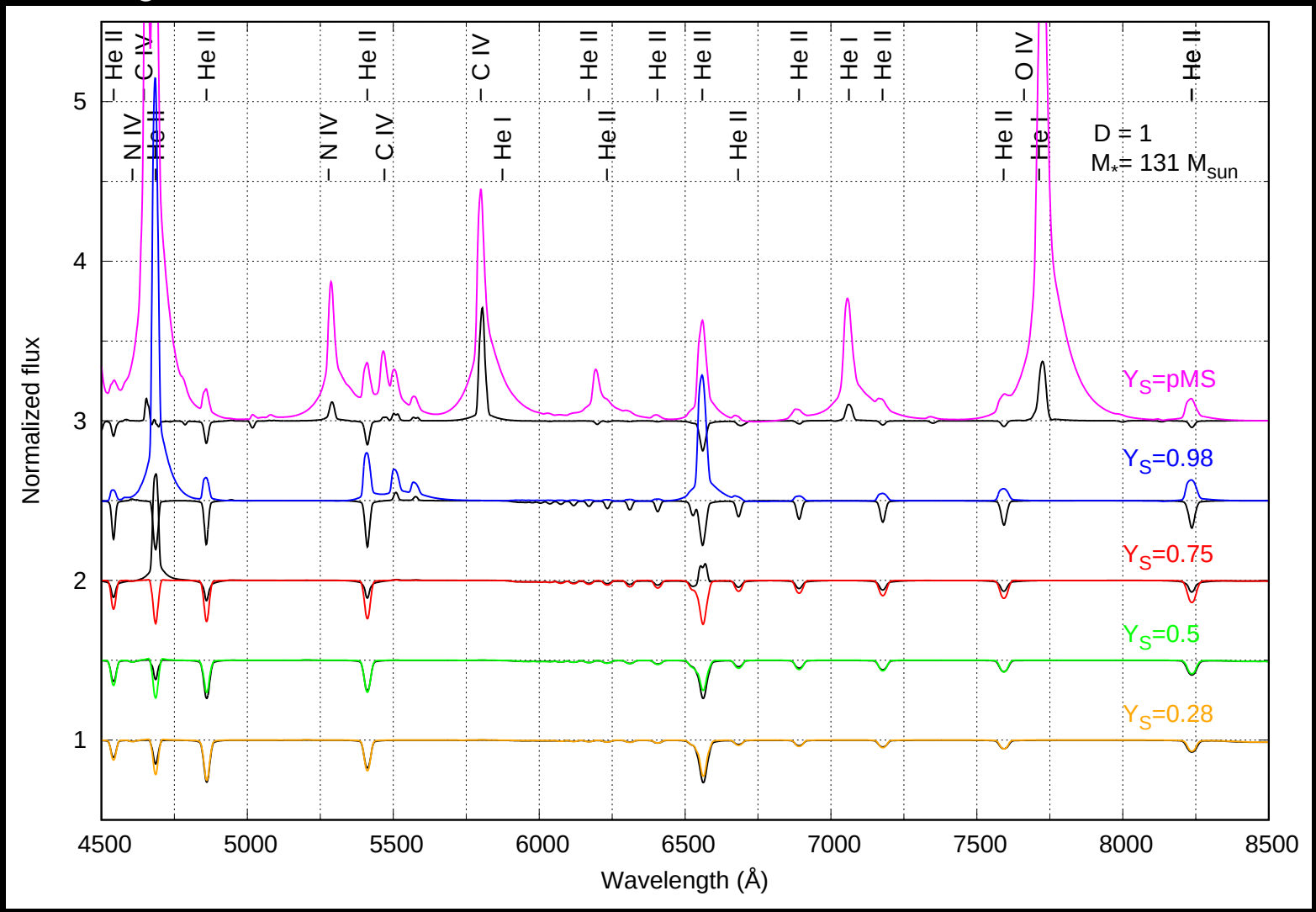
60 $M_\odot$



(Kubátová& Szécsi+in prep.)

TWUIN spectra modelling

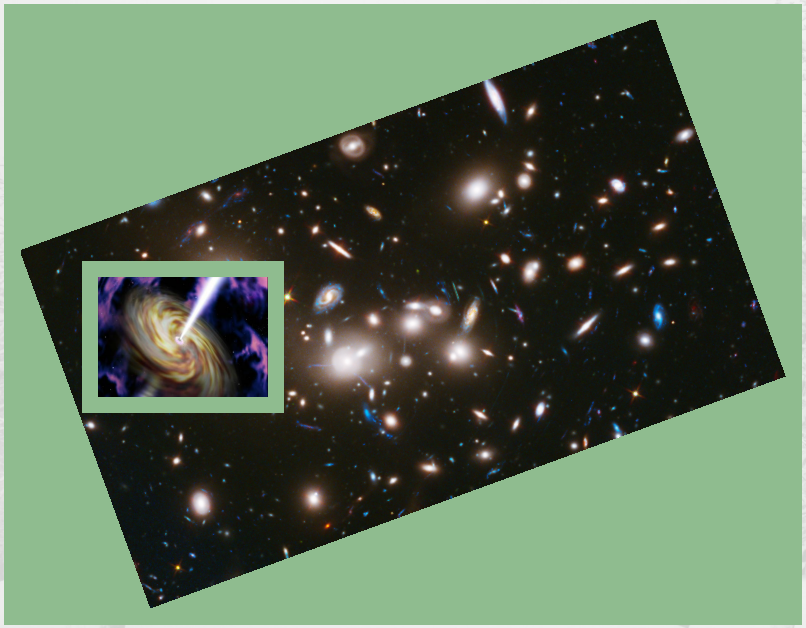
130 $M_\odot$



(Kubátová& Szécsi+in prep.)

Life & death — space mission THESEUS

At cosmological distances…



High-redshift galaxies & explosions

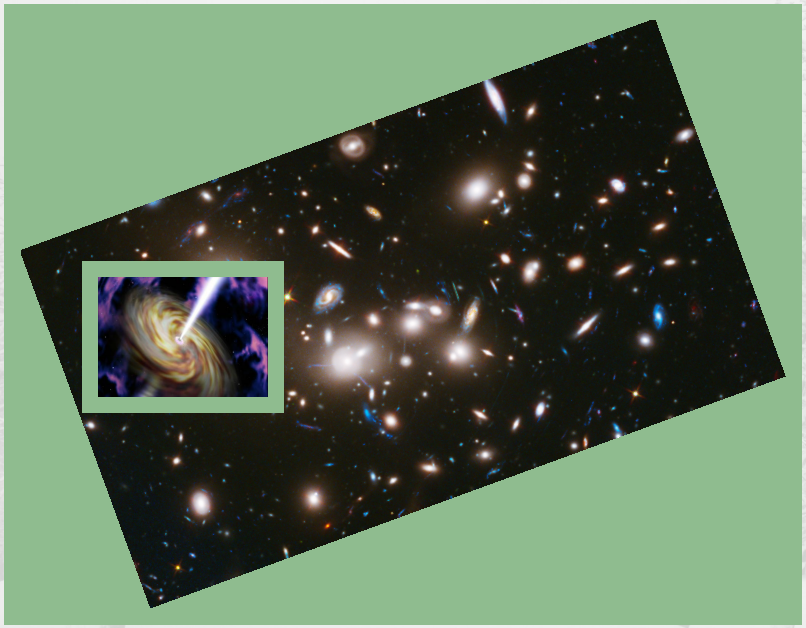
Life & death — space mission THESEUS

Shortlisted by ESA

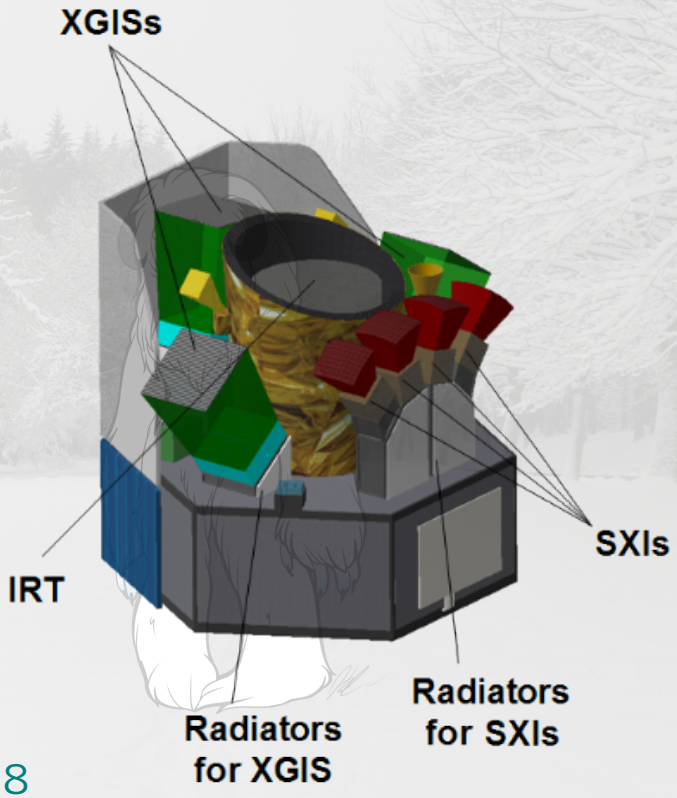
↓

decision in 2021

At cosmological distances…



High-redshift galaxies & explosions



Stratta+Szécsi+18

Szécsi+17a,b

Amati+Szécsi+17

Credit for Chilali, the Yeti girl's design: AskTheWerewolfPrince
(askthewerewolfprince.deviantart.com)